

PEDIATRICS

UNDER THE CHARGE OF

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The Deleterious Effect of the Alkalinization of Infants' Food.—HESS and UNGER (*Jour. Am. Med. Assn.*, November 1, 1919) call attention to the fact that little attention is paid to the reaction of the milk preparations fed to babies. Their attention was attracted to this question by their experience that milk formulas containing malt soup had an unusual tendency to bring about scurvy in infants unless an antiscorbutic such as orange-juice or canned tomato was added to the dietary. They think that the undesirable effect is brought about by one or more of the following conditions: that the formulas contain an amount of milk insufficient to protect fully; that the preparation is boiled as well as frequently prepared from pasteurized milk; that there is a period of incubation between the initial pasteurization and the boiling of the milk and flour; that an alkali is contained in the malt soup; and that a considerable amount of carbohydrate in the form of flour and of malt sugar is added to the food. They point out also that it is by no means immaterial whether the food is rendered more or less alkaline. It is impossible to say what effect an addition of alkali has on protein and other caloric food factors at the present state of knowledge. This alteration surely has a decided effect on the vitamins. They have shown in a previous article that orange-juice, the prototype of antiscorbutics is essentially damaged within twenty-four hours by being rendered twentieth normal alkaline to phenolphthalein. It was found that orange-juice of this faintly alkaline reaction had lost its power to protect guinea-pigs against scurvy. The antiscorbutic vitamin is peculiarly sensitive to alkalinization. This vitamin seems to be more sensitive to various physical and chemical influences than either the water-soluble or the fat-soluble vitamin. There is at present some difference of opinion as to the vulnerability of the water-soluble vitamin to the application of heat in an alkaline medium. The results of the authors have an application far wider than their application to malt soup. Investigation showed that alkaline potassium salt was added to the greater number of our proprietary foods for infants. There are two reasons for this, namely: it renders the food less subject to acid fermentation, and because the addition of potassium counterbalances the relative poverty of this salt in cow's milk. It is added in from 2 to 2.5 per cent. in the form of the bicarbonate of potassium. They suggest that the citrate of potassium could be substituted in these foods without giving rise to this danger of scurvy as is the case of the alkaline salts, except where the addition of the alkaline salt must be used in order to change the reaction from acid. They say that cod-liver oil is rich in the fat-soluble vitamin, and that it is almost a specific in the treatment of rickets.

Diabetes in Infancy and Childhood.—ART (*Endocrinology*, July-September, 1919) says that diabetes in children is infrequent as compared to diabetes in adult life. In the first fifteen years of life boys are more frequently affected, and both sexes show an equal frequency from five to ten years. Heredity has an influence but the author found such only occasionally. Trauma plays a part in causing diabetes. There is no clinical or pathological basis for the assumption that infectious diseases are a cause. No cases have been reported in the literature in which a relationship exists between lesions of the hypophysis and diabetes in children. Lipemia occurs frequently in diabetes. The symptoms are almost identical with those in adults such as loss in weight and strength, fatigue upon slight exertion, increased appetite, polydipsia and polyuria. Enuresis frequently occurs. Urticaria, pruritus, and eczema occur as well as furunculosis. The teeth decay early and stomatitis is not uncommon. Edema of the face and ankles have been seen in advanced cases. Headache, backache and radiating pains in the extremities are sometimes seen. Particularly characteristic are the pains in the calf muscles. The urine contains sugar, and at times acetone and diacetic acid and not infrequently albumin and casts. It may be either mild or severe and sometimes the transition from the mild to the severe form occurs more rapidly than in adults. Some children seem to improve after the sugar tolerance is established and urinary sugar kept low. The sugar returns on the slightest provocation such as disappointment from a bad school report and also following coryza, parotitis, pharyngitis and diarrhea. Usually the sugar tolerance can be restored, but succeeding recrudescences tend to reduce the level of the tolerance.

Psychopathic Clinic of the Children's Court of the City of New York.—MONTAGUE (*Mental Hygiene*, October, 1919) has studied 268 cases of recidivists with the result that she found that 82.9 per cent, with one previous court record were mental deviates and 24.5 per cent. of this number were feeble-minded. Of those with three or more court records 90.9 per cent. were mental deviates and 48.5 per cent. of this group were feeble-minded. In addition to the fact that mental deviation is such a high percentage, it is recognized that many criminal careers are due to repeated exposure of these individuals to unfavorable environment. Among the cases brought up to the clinic this stood out prominently. Of the cases studied 170, or 63.4 per cent., were found to have unfavorable environment.

The Role of the Pineal in Pediatrics.—GORDON (*Endocrinology*, October-December, 1919) says that it is generally accepted that the greatest postnatal development in the pineal gland is in the first few years of life, and that it is at all functionally active, it is at this period. Some believe that the pineal produces a secretion which inhibits the growth of the body and restrains mental and sexual development from exceeding the rate accepted as normal for pre-adult life. This inference arises from the occurrence of the sexual and physical precocity accompanying the invasion of the pineal gland, and that the resulting metabolic and neurological disturbances occur from lack of pineal secretion. Others claim that the symptoms of sexual and physical precocity are due to hyperpinealism instead of to a diminished secretion. It is

exceedingly difficult to arrive at any conclusive opinion as to the function of the pineal gland. There has been nothing substantial brought forward to show that it possesses a function and no experimental studies are so complete as to allow comparison with the very striking syndrome seen clinically.

Early Synostosis of the Epiphysis with Dwarfism in Pubertas Precox.—KRABBE (*Endocrinology*, October–December, 1919) reports a case of a girl, aged thirteen and a half years. Bleeding from the vagina began when she was only a few months old, and has recurred regularly every four weeks since that time. The breasts were always prominent, but it was noted that they were most prominent from her sixth to her seventh years. After that time there was a diminution in size, and now they have the appearance of the breasts of a middle-aged virgin. For two or three years a growth of hair in the axilla and over the pubis was noticed. Her hips and thighs have always been large. She grew rapidly in height until she was seven years of age. Since that time growth has stopped. The lower limbs are strikingly short in relation to the trunk. Roentgen-ray showed a normal sella turcica. All of the epiphyseal fissures of the lower and upper limbs were completely grown together. The girl has a childish face and has given no evidence of any sexual knowledge in spite of the marked development of menstrual function and external evidences of sexual maturity. For this reason no intravaginal examination were made, so that the reporter was unable to eliminate the possibility of an ovarian abnormality being the cause of the condition. This type of dwarfism is in characteristic contrast to that which is found in thyroid and pituitary diseases. In these the epiphyseal fissures remain barely open, but for an abnormally long time.

Bone Deformities of Renal Dwarfism.—BARBER (*Lancet*) says that in the last few years a number of cases of interstitial nephritis in children associated with stunted growth have been recorded, some of them with infantilism in all of its characteristics, others with merely a marked degree of dwarfism. It is not easy to select a name for this condition, but as the kidney disease not infrequently has a very insidious onset, and many of the cases seek advice for the first time because of retardation of development, or for bone deformity, some name such as renal dwarfism may be used. Out of 8 cases 5 have shown bone deformity, but this does not enable one to discuss the percentage, because 4 of these 5 first sought advice for genu valgum. The signs and symptoms are more or less latent, and there may be cases of interstitial nephritis, which are never diagnosed at all. The deformities appear to develop about the time of puberty. The genu valgum appears to develop comparatively quickly, straight legs becoming markedly deformed in a few weeks. In type the changes seem to be very similar to those of rickets, the wrists and knee-joints being most noticeably affected, but some swelling is often palpable at the junctions of the ribs and costal cartilages. Roentgenologically the most marked changes are seen at the wrists and the knee-joints, there being an increase in size of the proliferation zones, and the normal translucent line is greatly increased in breadth. There is not only enlargement, but also great irregularity and

want of definition due to irregular calcification. In this article there are reported 3 cases which show these signs and symptoms. One of these cases has since died as a result of uremia. Postmortem the kidneys were found to be very small and fibrotic. Microscopically there was a very marked interstitial nephritis.

GYNECOLOGY

UNDER THE CHARGE OF

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Effect of Radium on Cervical Cancer.—A very extensive study of the histological changes in squamous-cell carcinoma of the cervix of the uterus after radiation has been made by ALTER (*Jour. Med. Research*, 1919, xl, 241) during the course of which he determined that the so-called "squamous"-cell carcinoma of the cervix is a basal-cell growth, having three types: Solid, adenoid and cystic. The primary effect of the rays of radium in the case of the basal-cell carcinoma of the cervix is the destruction of the cells of the malignant parenchyma. The increase of stroma is secondary, due to the disappearance of parenchyma, having been formed mostly from wandering cells. Cell divisions, even if probable, are not primarily important. In his long series of histological investigations, invariably the chromatin substance of the parenchyma cells displayed the greatest sensitiveness toward the rays of radium, showing conspicuous features of destruction while the protoplasm of the parenchyma cells showed marked but not such obvious changes. Alter believes that the changes of the protoplasm and the nature of the infiltration seem to suggest the different stages of deep-seated chemical changes, due to the action of the rays of radium.

The Cystic Ovary.—A moderate acquaintance with the cystic ovary, gleaned through serious and earnest attention whenever the condition was encountered during an abdominal section, has led REDER (*Am. Jour. Obst.*, 1919, lxxx, 719) during latter years into a different channel of reasoning relative to the treatment of this condition, from which he entertained during former years. The cystic ovary, which is being considered in this article, is not the organ which has suffered from a microbic invasion; but the organ which, through adverse influences, reasonably assumed to be mechanical in their nature has suffered changes in its stroma and epithelial structure that have carried it beyond recognized physiologic limits. Furthermore, this argument is confined to ovaries belonging to unmarried women, ranging from fourteen to